

Remarks/Arguments

35 U.S.C. §103

Claims 1-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Caldwell (U.S. Publication No. 2002/0122393 A1), and further in view of Herscovich (U.S. Publication No. 2007/0087788 A1).

It is respectfully submitted that neither Caldwell nor Hersocovich, alone or in combination, disclose a method with the step of:

“listening to the communications between two other transmitting/receiving stations of the network successively on each reception antenna by picking up frames transmitted by one of the transmitting/receiving stations,”

as described in currently amended claim 1.

Among the problems addressed by the present invention is the reduction in bandwidth that occurs in a wireless network when test frames are used to adjust diversity reception. To address this problem, the present application discloses a method of operating a transmitting/receiving station of a wireless communication network in antenna diversity mode, the method comprising the steps of listening to the communications between two other transmitting/receiving stations of the network successively on each reception antenna by picking up frames transmitted by one of the transmitting/receiving stations, and analyzing the quality of listening on each reception antenna so as to identify a reception antenna from among the plurality of reception antennas which sets up the best communication link with one of the said other two transmitting/receiving stations.

With this method, the station no longer requires the use of test frames to select an antenna for operating in diversity mode and the choice of the reception antenna is made during its period of inactivity. Thus, the disclosed method helps to improve the performance of a wireless communication network without degrading the bandwidth. (Specification, page 3, lines 26-32)

In contrast, Caldwell teaches a “method whereby a mobile terminal (MT) operating in a wireless local area network (WLAN), for example HiperLAN2, can effect antenna diversity. The mobile terminal which has at least two antennas (24, 26) monitors downlink fields in successive time frames in a time division radio transmission for indications of when downlink message signals are to be sent to mobile terminals other than the one effecting the monitoring and determines from the indications when there will be in the time frame a time period of sufficient duration for the mobile terminal to effect antenna diversity measurements. The mobile terminal measures in the selected time period the quality of signal reception by each of the at least two antennas and selects the one of the said at least two antennas providing the better (or best) quality of signal reception.” (Caldwell Abstract)

Caldwell does not disclose a method or device related to listening to the communications between two other transmitting/receiving stations of the network successively on each reception antenna or analyzing the quality of listening on each reception antenna so as to identify the antenna which sets up the best communication link with one of the other stations. Instead, Caldwell analyzes downlink transmissions, not station to station transmissions, and uses the result to determine time availability for diversity measurements, not for the antenna selection itself. Thus, Caldwell fails to disclose a method with the step of “listening to the communications between two other transmitting/receiving stations of the network, successively on each reception antenna by picking up frames transmitted by one of the transmitting/receiving stations,” as described in currently amended claim 1.

Herscovich teaches a device with “multiple directional antennas and multiple backhaul radio modules which provide point to point wireless links with other wireless devices. Each radio module can use any one of the available directional antennas to link to one other routing device. Antennas are automatically selected for each wireless device by merely setting one device in a “hunt” mode and setting another device in a “listen” mode. Devices in a hunt mode cycle through the available antennas by sequentially transmitting transmit messages to devices in the listen mode using each of the available antennas in turn. Devices in the listen mode also cycle through their available antennas by sequentially “listening” for transmit messages. A listen mode device, receives transmit messages on

each of its available antennas, and, after gathering the relevant data, determines which of its antennas is best suited for communicating with the hunt mode device. The listen mode device antenna which is best suited is then used to transmit a response message to the hunt mode device. This listen mode device antenna is thus configured for communicating with the hunt mode device. Similarly, when the hunt mode device receives the response message, it designates its antenna which transmitted the transmit message as being configured for communications with the listen mode device.” (Herscovich Abstract)

Herscovich does not disclose a method or device related to listening to the communications between two other transmitting/receiving stations of the network successively on each reception antenna. Instead, the station undergoing antenna selection in Herscovich uses the specific “listen” mode and receives test frames from other stations which are in “hunt” mode. Herscovich therefore fails to provide the advantage of the present invention of allowing selection of an antenna without test frames specifically being directed at the device. Thus, Herscovich, like Caldwell, fails to disclose a method with the step of “listening to the communications between two other transmitting/receiving stations of the network, successively on each reception antenna by picking up frames transmitted by one of the transmitting/receiving stations,” as described in currently amended claim 1.

In view of the above remarks and amendments to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure provided by Caldwell or Herscovich, alone or in combination, that makes the present invention as claimed in currently amended claim 1 unpatentable. It further submitted that currently amended independent claim 9 is allowable for at least the same reasons as claim 1. Since dependent claims 2-6, 8, 10-14, and 16-17 are dependent from allowable independent claims 1 and 9, it is respectfully submitted that they too are allowable for at least the same reasons that claim 8 is allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Having fully addressed the Examiner’s rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the

Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's representative at (609) 734-6804, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

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